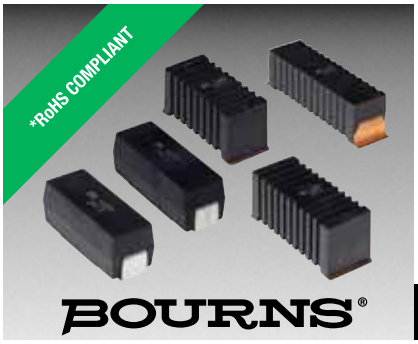


Features

- Superior pulse capability
- Very high power – up to 10 W
- Excellent surge capabilities
- Super low TCR
- Non-inductive versions available
- UL 94V0, RoHS* and SVHC compliant
- Halogen free model available

Applications

- High power discharging applications
- Telecommunications
- Switching power supplies
- Motor controls
- High pulse withstanding applications

PWR6927/8030/8937/A247/B053 Power Wirewound Resistors

General Information

The Model PWR6927/8030/8937/A247/B053 Series surface mount wirewound resistors boast a high power density and excellent pulse power characteristics. These models can be used in a wide range of applications where surge voltages or inrush currents are present.

Additional Information

Click these links for more information:

PRODUCT | TECHNICAL LIBRARY | INVENTORY | SAMPLES | CONTACT

Electrical Characteristics

Parameter	PWR6927	PWR8030	PWR8937	PWRA247	PWRB053
Power	3 W	5 W	5 W	7 W	10 W
Resistance Range 1 % Based on E24+E96 Series 5 % Based on E24 Series	0.05 Ω - 16K Ω	0.1 Ω - 22K Ω	0.1 Ω - 33K Ω	0.1 Ω - 50K Ω	0.1 Ω - 70K Ω
Resistance Range (Non-inductive Versions) Based on E24 Series	0.05 Ω - 3.3K Ω	0.05 Ω - 4K Ω	0.05 Ω - 6K Ω	0.05 Ω - 8K Ω	0.05 Ω - 10K
Tolerance	0.5 % / 1 % / 5 %				
Temperature Coefficient <0.1 Ω 0.1 - 0.99 Ω 1.0 - 10 Ω >10 Ω	±300 PPM/°C ±90 PPM/°C ±50 PPM/°C ±20 PPM/°C				
Operating Temperature	-65 °C to +175 °C				
Maximum Voltage	√P*R				

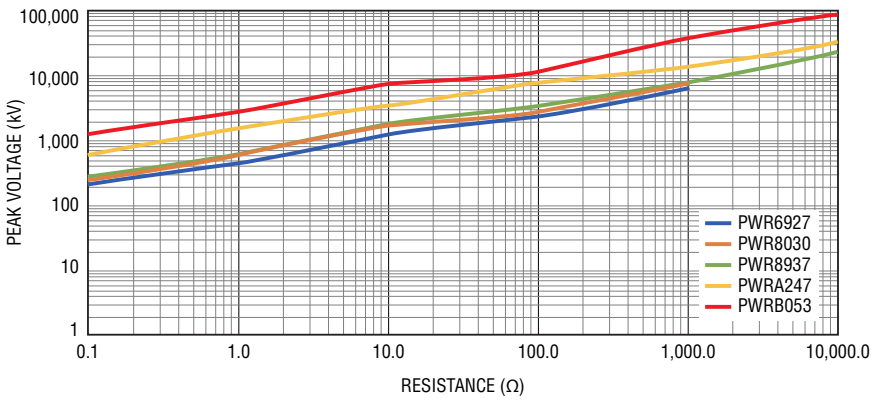
Performance

Test	Description	Specification
Load Life	Chamber temp. 70 ±2 °C, voltage cycle: rated d.c. voltage application 1hr. 30 min. and rest of 30 min. repeatedly for 1K hrs.	ΔR ±1.0 %
Short Time Overload	0.25 W ~ 4 W: 5X rated power for 5 seconds 5 W ~ 10 W: 10X rated power for 5 seconds	ΔR ±(0.5 % +0.05 Ω)
Periodic Pulse Overload	4X power, 1 s. ON, 25 s. OFF, 10000 +400/-0 cycles	ΔR ±(0.5 % +0.05 Ω)
Shock	Impact acceleration 100 g, pulse duration 6 ms, 18 shocks	ΔR ±(0.1 % +0.05 Ω)
Vibration	10 Hz to 2 KHz, 1 oct/min., 20 g, 3 axis, 7.5 hrs.	ΔR ±(0.1 % +0.05 Ω)
Thermal Shock	-55 °C to +150 °C +3/-0 °C, 5 cycles, 15 min. in max.	ΔR ±1 %
Solderability	Bath temperature 250 ±3 °C, immersion time 3 ±0.3 sec.	>95 % of contact face covered new solder
Resistance to Solder Heat	Immersion in solder 260 °C ±5 °C for 10 ±0.3 seconds	ΔR ±(0.5 % +0.05 Ω)
Insulation Resistance	Apply max. overload voltage, duration 1 minute	>1G Ω
Dielectric Strength	Test voltage 500 V ±10 %, duration 1 minute	Pass

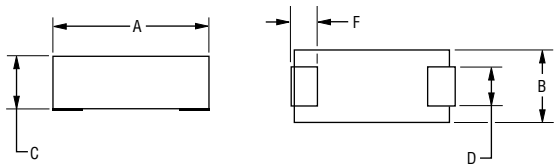
WARNING
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

* RoHS Directive 2015/863, Mar 31, 2015 and Annex.
** Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

Surge Performance (IEC 61000-4-5 1.2 μs / 50 μs)



Product Dimensions



TOLERANCE: ±0.05 (±.002)

DIMENSIONS: MM (INCHES)

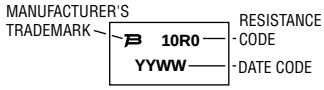
Environmental Characteristics (Cont'd)

Moisture Sensitivity Level.....1
ESD Classification (HBM).....N/A

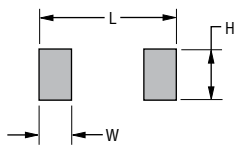
Physical Characteristics

Body Material.....Epoxy resin
Lead Frame.....100 % Sn Plated Copper
Flammability.....Conforms to UL 94V-0

Typical Part Marking



Recommended Pad Layout

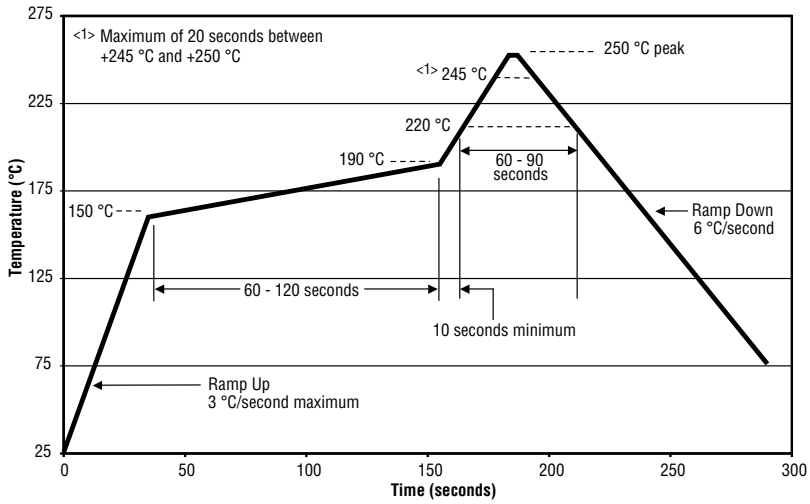


Model	A	F	L	C	B	D	W	H
PWR6927	17.50 (0.689)	2.50 (0.098)	18.5 (0.728)	6.80 (0.267)	6.92 (0.272)	4.80 (0.189)	3.50 (0.138)	6.00 (0.236)
PWR8030	20.80 (0.820)	3.00 (0.118)	21.8 (0.858)	7.80 (0.307)	7.60 (0.299)	4.80 (0.189)	4.00 (0.157)	5.50 (0.217)
PWR8937	22.50 (0.886)	3.00 (0.118)	23.9 (0.941)	10.30 (0.406)	9.20 (0.362)	9.20 (0.362)	4.30 (0.169)	10.0 (0.394)
PWRA247	30.60 (1.205)	3.50 (0.138)	32.0 (1.260)	13.00 (0.512)	12.0 (0.472)	11.80 (0.465)	4.80 (0.189)	12.7 (0.500)
PWRB053	51.60 (2.030)	2.00 (0.079)	53.0 (2.087)	15.00 (0.591)	13.6 (0.535)	13.6 (0.535)	3.40 (0.134)	14.3 (0.563)

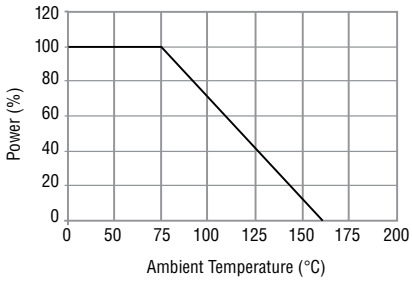
Packaging Specifications

Model	Tape Width	Reel Diameter	Pieces per Reel
PWR6927	32.0 (1.259)	330 (13.0)	500
PWR8030			
PWR8937	44.0 (1.732)		300
PWRA247			200
PWRB053	72.0 (2.835)		100

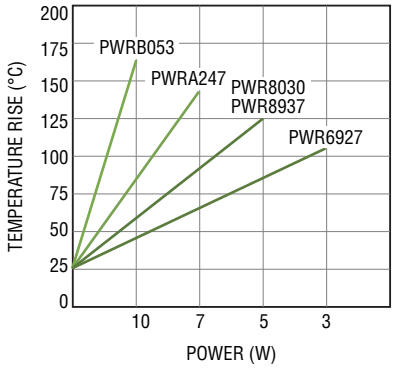
Soldering Profile



Power Derating Curve



Temperature Rise



How to Order

PWR6927 W __ 10R0 J E

Model
- PWR6927
- PWR8030
- PWR8937
- PWRA247
- PWRB053

Type
- W = Wirewound
- N = Non-inductive Option

Special Version
- Blank = Default
- H = Halogen Free

Resistance Value
- <100 ohms ... "R" represents decimal point (examples: 7R50 = 7.5 Ω; R050 = 0.050 Ω)
- ≥100 ohms.... First three digits are significant, fourth digit represents number of zeros to follow (examples: 2000 = 200 ohms; 2002 = 20K ohms)

Resistance Tolerance
- J = 5 %
- F = 1 %
- D = 0.5 %

Packaging
- E = Tape & Reel

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